CLAIMS

1. A method for identification of agents or compounds useful to modulate KSHV infection, comprising:

(a) contacting one or more KSHV-infected cells with a test agent or compound;

(b) measuring in the one or more cells, and using a suitable assay, expression of a *validated* KSHV-induced cellular gene or gene product, wherein a *validated* gene or gene product is a gene or gene product the expression of which is required, at least to some extent, for KSHV infection or KSHV-mediated effects on cellular proliferation and phenotype; and

(c) determining, relative to one or more control cells not contacted with the test agent or compound, whether the test agent or compound inhibits the *validated* gene or gene product expression, whereby agents or compounds that inhibit the *validated* gene or gene product expression are identified as agents or compounds useful to modulate KSHV infection.

2. The method of claim 1, wherein measuring expression of a *validated* KSHV-induced cellular gene or gene product is by measuring the presence or amount at least one of the corresponding mRNA or the protein product encoded thereby.

3. The methods of any one of claims 1 or 2, further comprising testing of the agents or compounds that inhibit the *validated* KSHV-induced cellular gene or gene product expression for the ability to modulate at least one of KSHV infection, or KSHV-mediated effects on cellular proliferation or phenotype.

4. The methods of any one of claims 1, 2 or 3, wherein the KSHV-infected cells are KSHV-infected dermal microvascular endothelial cells (DMVEC).

5. The method of any one of claims 1-4, comprising measuring the expression of a plurality of *validated* KSHV-induced cellular genes or gene products.

6. The method of any one of claims 1-5, wherein at least one of measuring or determining comprises use of high-throughput microarray methods.

7. The method or assay of any one of claims 1 through 6, wherein the validated KSHV-induced cellular genes or gene products correspond to one or more nucleic acid sequences selected from the group consisting of SEQ ID NOS:1, 3, 5, 7, 9, 11, 13, 25, 27 and 29, for the RDC-1, IGFBP2, FLJ14103, KIAA0367, Neuritin, INSR, KIT (c-kit), LOX, NOV and ANGPTL2 cDNA sequences, respectively.

8. The methods of any one of claims 1 through 6, wherein the validated KSHV-induced cellular genes or gene products correspond to one or more amino acid sequences selected from the group consisting of SEQ ID NOS:2, 4, 6, 8, 10, 12, 14, 26, 28 and 30, for the

RDC-1, IGFBP2, FLJ14103, KIAA0367, Neuritin, INSR, KIT (c-kit), LOX, NOV and ANGPTL2 protein sequences, respectively.

9. A diagnostic or prognostic assay for KSHV infection, comprising:

(a) obtaining a cell sample from a subject having, or suspected of having KSHV;

(b) measuring in the sample, and using a suitable assay, expression of a *validated* KSHV-induced cellular gene or gene product, wherein a *validated* gene or gene product is a gene or gene product the expression of which is required, at least to some extent, for KSHV infection; and

(c) determining, based on the measuring, and relative to that of non-KSHV-infected control cells, whether expression of the *validated* KSHV-induced cellular gene or gene product is induced, whereby a diagnosis or prognosis is, at least in part, afforded.

10. The assay of claim 9, comprising measuring the expression of a plurality of *validated* KSHV-induced cellular genes or gene products.

11. The assay of any one of claims 9 or 10, wherein at least one of measuring or determining comprises use of high-throughput microarray methods.

12. The assay of any one of claims 9, 10 or 11, wherein the validated KSHV-induced cellular genes or gene products correspond to one or more nucleic acid sequences selected from the group consisting of SEQ ID NOS:1, 3, 5, 7, 9, 11, 13, 25, 27 and 29, for the RDC-1, IGFBP2, FLJ14103, KIAA0367, Neuritin, INSR, KIT (c-kit), LOX, NOV and ANGPTL2 cDNA sequences, respectively.

13. The assay of any one of claims 9, 10 or 11, wherein the validated KSHV-induced cellular genes or gene products correspond to one or more amino acid sequences selected from the group consisting of SEQ ID NOS:2, 4, 6, 8, 10, 12, 14, 26, 28 and 30, for the RDC-1, IGFBP2, FLJ14103, KIAA0367, Neuritin, INSR, KIT (c-kit), LOX, NOV and ANGPTL2 protein sequences, respectively.

14. A method of inhibiting at least one of: KSHV-induced cellular gene expression or encoded biological activity; KSHV infection; or KSHV-mediated effects on cellular proliferation and phenotype, comprising introducing into, or expressing within a KSHV-infected human cell at least one of an antisense, siRNA or ribozyme agent specific for a *validated* KSHV-induced cellular gene sequence, and in an amount sufficient to inhibit, at least to some extent, expression of the *validated* KSHV-induced cellular gene sequence, wherein a *validated* KSHV-induced cellular gene sequence is a nucleic acid sequence the expression of which is required, at least to some extent, for the KSHV-induced cellular gene expression or encoded biological activity, the KSHV infection, or the KSHV-mediated effects on cellular proliferation and phenotype.

15. The method of claim 14, wherein inhibiting the KSHV-mediated effects on cellular proliferation and phenotype comprises inhibiting proliferation or development of cancer cells.

16. The method of any one of claims 14 or 15, wherein the *validated* KSHV-induced cellular gene sequence is that corresponding to a nucleic acid sequence selected from the group consisting of SEQ ID NOS:1, 3, 5, 7, 9, 11, 13, 25, 27 and 29, for the RDC-1, IGFBP2, FLJ14103, KIAA0367, Neuritin, INSR, KIT (c-kit), LOX, NOV and ANGPTL2 cDNA sequences, respectively.

17. The method of any one of claims 14-16, wherein the antisense agent specific for a *validated* KSHV-induced cellular gene sequence comprises a nucleic acid sequence of at least 18 contiguous bases in length that is complementary to, or hybridizes under moderately stringent or stringent conditions to a sequence selected from the group consisting of SEQ ID NOS:1, 3, 5, 7, 9, 11, 13, 25, 27, 29, and sequences complementary thereto.

18. The method of any one of claims 14-17, wherein the antisense agent specific for a *validated* KSHV-induced cellular gene sequence comprises a nucleic acid sequence selected from the group consisting of SEQ ID NOS:15-24, 31-32 and 33.

19. The method of any one of claims 14-18, wherein the *validated* KSHV-induced cellular gene sequence-specific antisense agent comprises a Phosphorodiamidate Morpholino Oligomers (PMO) antisense oligonucleotide specific for the *validated* KSHV-induced cellular gene sequence.

20. A method for inhibiting or treating KSHV-infection in a subject, or for treating KSHV-related neoplastic disease, comprising administering to the subject a therapeutically effective amount of at least one of an antisense, siRNA or ribozyme agent specific for a *validated* KSHV-induced cellular gene sequence, wherein the *validated* KSHV-induced cellular gene sequence is a nucleic acid sequence the expression of which is required, at least to some extent, for the KSHV-infection or the KSHV-related neoplastic disease.

21. The method of claim 20, wherein the *validated* KSHV-induced cellular gene sequence is that corresponding to a nucleic acid sequence selected from the group consisting of SEQ ID NOS:1, 3, 5, 7, 9, 11, 13, 25, 27 and 29, for the RDC-1, IGFBP2, FLJ14103, KIAA0367, Neuritin, INSR, KIT (c-kit), LOX, NOV and ANGPTL2 cDNA sequences, respectively.

22. The method of any one of claims 20 or 21, wherein the antisense agent specific for a *validated* KSHV-induced cellular gene sequence comprises a nucleic acid sequence of at least 18 contiguous bases in length that is complementary to, or hybridizes under moderately

stringent or stringent conditions to a sequence selected from the group consisting of SEQ ID NOS:1, 3, 5, 7, 9, 11, 13, 25, 27, 29, and sequences complementary thereto.

23. The method of any one of claims 20-22, wherein the antisense agent specific for a *validated* KSHV-induced cellular gene sequence comprises a nucleic acid sequence selected from the group consisting of SEQ ID NOS:15-24, 31-32 and 33.

24. The method of any one of claims 20-23, wherein the *validated* KSHV-induced cellular gene sequence-specific antisense agent comprises a Phosphorodiamidate Morpholino Oligomers (PMO) antisense oligonucleotide specific for the *validated* KSHV-induced cellular gene sequence.

25. Use of an inhibitor of *validated* KSHV-induced gene or gene product expression to prepare a medicament for modulating at least one of KSHV infection, KSHV-mediated effects on cellular proliferation or phenotype, or KSHV-related neoplastic disease, and wherein the inhibitor comprises at least one of an antisense, siRNA or ribozyme agent specific for the *validated* KSHV-induced gene or gene product.

26. The use of claim 25, wherein the validated KSHV-induced cellular genes or gene products correspond to one or more nucleic acid sequences selected from the group consisting of SEQ ID NOS:1, 3, 5, 7, 9, 11, 13, 25, 27 and 29, for the RDC-1, IGFBP2, FLJ14103, KIAA0367, Neuritin, INSR, KIT (c-kit), LOX, NOV and ANGPTL2 cDNA sequences, respectively.

27. The use of claim 25, wherein the validated KSHV-induced cellular genes or gene products correspond to one or more amino acid sequences selected from the group consisting of SEQ ID NOS:2, 4, 6, 8, 10, 12, 14, 26, 28 and 30, for the RDC-1, IGFBP2, FLJ14103, KIAA0367, Neuritin, INSR, KIT (c-kit), LOX, NOV and ANGPTL2 protein sequences, respectively.

28. The use of any one of claims 25, 26 or 27, wherein the inhibitor of *validated* KSHV-induced gene or gene product expression comprises an antisense agent specific to the *validated* KSHV-induced gene or gene product.

29. The use of any one of claims 25-28, wherein the antisense agent specific for a *validated* KSHV-induced cellular gene sequence comprises a nucleic acid sequence of at least 18 contiguous bases in length that is complementary to, or hybridizes under moderately stringent or stringent conditions to a sequence selected from the group consisting of SEQ ID NOS:1, 3, 5, 7, 9, 11, 13, 25, 27, 29, and sequences complementary thereto.

30. The use of any one of claims 25-29, wherein the antisense agent specific for a *validated* KSHV-induced cellular gene sequence comprises a nucleic acid sequence selected from the group consisting of SEQ ID NOS:15-24, 31-32 and 33.

31. The use of any one of claims 25-30, wherein the *validated* KSHV-induced cellular gene sequence-specific antisense agent comprises a Phosphorodiamidate Morpholino Oligomers (PMO) antisense oligonucleotide specific for the *validated* KSHV-induced cellular gene sequence.

32. An antisense oligonucleotide, siRNA agent, or a ribozyme agent comprising a sequence of about 10 to about 35 contiguous nucleotides in length that is complementary to, or hybridizes under moderately stringent or stringent conditions to a sequence selected from the group consisting of SEQ ID NOS:1, 3, 5, 7, 9, 11, 13, 25, 27, 29, and sequences complementary thereto, wherein the antisense oligonucleotide, siRNA agent, or a ribozyme agent is effective to inhibit cellular expression, at least to some degree, of the respective KSHV-induced human cellular gene product.

33. A recombinant expression vector, comprising a transcriptional initiation region and a sequence encoding a KSHV-induced gene-specific antisense oligonucleotide, siRNA agent, or ribozyme agent a sequence of about 10 to about 35 contiguous nucleotides in length that is complementary to, or hybridizes under moderately stringent or stringent conditions to a sequence selected from the group consisting of SEQ ID NOS:1, 3, 5, 7, 9, 11, 13, 25, 27, 29, and sequences complementary thereto.

34. An *in vivo* mouse model for KSHV infection and KSHV-related conditions, comprising introduction of KSHV-infected human dermal microvascular endothelial cells (DMVEC) into a immunodeficient NUDE mouse strain.

34. The mouse model of claim 34, wherein the NUDE mouse strain is *Foxn1*^{nu} on a BALB/cByJ genetic background.

35. The mouse model of any one of claims 34 or 35, wherein KS-like tumors are induced by introduction of KSHV-infected human dermal microvascular endothelial cells (DMVEC).